

What is claimed is:

1. A reflection-type liquid crystal display device comprising:

a light guide plate having a polarizing element stuck or adhered thereto on the side facing a reflection-type liquid crystal display panel and arranged maintaining a predetermined gap relative to the reflection-type liquid crystal display panel;

a source of light arranged on an end surface side of the light guide plate;

a light-diffusing function imparted to the surface of the reflection-type liquid crystal display panel on the side facing the light guide plate.

2. A reflection-type liquid crystal display device according to claim 1, wherein the reflection-type liquid crystal display panel has a rough surface on the side facing the light guide plate.

3. A reflection-type liquid crystal display device according to claim 1, wherein a film having a light-diffusing function is stuck to the surface of the reflection-type liquid crystal display panel on the side facing the light guide plate.

4. A reflection-type liquid crystal display device according to claim 3, wherein the film having the light-diffusing function comprises a sticking layer containing a light-diffusing material and a triacetyl cellulose film.

5. A reflection-type liquid crystal display device according to claim 3, wherein the film having the light-diffusing function is subjected to the reflection-preventing treatment on the side of the interface to the air layer.

6. A reflection-type liquid crystal display device comprising:

a light guide plate having a polarizing element stuck or adhered thereto on the side facing a reflection-type liquid crystal display panel and arranged maintaining a predetermined gap relative to the reflection-type liquid crystal display panel;

a source of light arranged on an end surface side of the light guide plate;

a member having a light-diffusing function and interposed between the polarizing element and the light guide plate.

7. A reflection-type liquid crystal display device according to claim 6, wherein the polarizing element has a plurality of sticking layers, and the light-diffusing material is contained in at least one of the plurality of sticking layers.

8. A reflection-type liquid crystal display device according to claim 7, wherein the light-diffusing material is contained in a sticking layer of the side close to the light guide plate among the plurality of sticking layers constituting the polarizing element.

9. A reflection-type liquid crystal display device according to claim 8, wherein the light-diffusing material is contained in a sticking layer that is in contact with the light guide plate among the plurality of sticking layers constituting the polarizing element.

10. A reflection-type liquid crystal display device according to claim 6, wherein the outermost surface of the polarizing element stuck or adhered to the light guide plate is a rough surface.

11. A reflection-type liquid crystal display device according to claim 6, wherein the polarizing element is subjected to the reflection-preventing treatment on the side of the interface to the air layer.

12. A reflection-type liquid crystal display device comprising:

- a light guide plate having a polarizing element stuck or adhered thereto on the side facing a reflection-type liquid crystal display panel and arranged maintaining a predetermined gap relative to the reflection-type liquid crystal display panel;

- a source of light arranged on an end surface side of the light guide plate;

- a light-diffusing function imparted to the surface of the reflection-type liquid crystal display panel on the side facing the light guide plate; and

- a member having a light-diffusing function and interposed

between the polarizing element and the light guide plate 2.

13. A reflection-type liquid crystal display device comprising:

at least a reflection-type liquid crystal display panel, a first retardation plate, a second retardation plate, a polarizing plate and a light guide plate laminated in this order;

wherein, the first retardation plate is stuck or adhered to the reflection-type liquid crystal display panel, the second retardation plate and the polarizing plate are stuck or adhered to the light guide plate, and a circular polarizer is constituted by the first retardation plate, second retardation plate and polarizing plate.

14. A reflection-type liquid crystal display device according to claim 13, wherein an angle subtended by delay phase axes of the first retardation plate and of the second retardation plate is not smaller than 0 degree but is not larger than 30 degrees, and the sum of in-plane retardations of the first retardation plate and of the second retardation plates is not smaller than 95 nm but is not larger than 195 nm, which is one-fourth the region of visible light wavelengths.

15. A reflection-type liquid crystal display device according to claim 13, wherein an angle subtended by delay phase axes of the first retardation plate and of the second retardation plate is not smaller than 60 degree but is not larger than 90 degrees, and the difference in the in-plane retardation between the first retardation plate and the second retardation plate

is not smaller than 95 nm but is not larger than 195 nm, which is one-fourth the region of visible light wavelengths.

16. A reflection-type liquid crystal display device according to claim 13, wherein an angle subtended by an absorption axis of the polarizing plate and by a delay phase axis of the second retardation plate is  $\theta$ , an angle subtended by an absorption axis of the polarizing plate and by a delay phase axis of the first retardation plate is about  $2\theta + 45$  degrees, and the difference in the in-plane retardation between the first retardation plate and the second retardation plate is not smaller than 95 nm but is not larger than 195 nm, which is one-fourth the region of visible light wave lengths.

17. A reflection-type liquid crystal display device according to claim 13, wherein a third retardation plate having an in-plane retardation of not smaller than 190 nm but not larger than 390 nm which is one-half the region of visible light wavelengths is disposed between the polarizing plate and the second retardation plate.

18. A reflection-type liquid crystal display device according to claim 17, wherein the angle subtended by an absorption axis of the polarizing plate and by a delay phase axis of the third retardation plate is  $\theta$ , an angle subtended by the absorption axis of the polarizing plate and by a delay phase axis of the second retardation plate is roughly  $2\theta + 45$  degrees, and the difference in the in-plane retardation between the third retardation plate and the first and the second

retardation plates is not smaller than 95 nm but is not larger than 195 nm, which is one-fourth the region of visible light wavelengths.

19. A reflection-type liquid crystal display device according to claim 17, wherein the angle subtended by an absorption axis of the polarizing plate and by a delay phase axis of the third retardation plate is  $\theta$ , an angle subtended by a absorption axis of the polarizing plate and by the delay phase axis of the second retardation plate is roughly  $2\theta + 45$  degrees, a delay phase axis of the second retardation plate and a delay phase axis of the first retardation plate are nearly at right angles with each other, and the difference in the in-plane retardation between the second retardation plate and the first retardation plate is not smaller than 95 nm but is not larger than 195 nm, which is one-fourth the region of visible light wavelengths.

20. A reflection-type liquid crystal display device according to claim 13, wherein a third retardation plate and a fourth retardation plate having an in-plane retardation of not smaller than 190 nm but not larger than 390 nm, which is one-half the region of visible light wavelengths, are disposed between the polarizing plate and the second retardation plate.

21. A reflection-type liquid crystal display device according to claim 20, wherein an angle subtended by an absorption axis of the polarizing plate and by a delay phase axis of the fourth retardation plate is  $\theta$ , an angle subtended

by the absorption axis of the polarizing plate and by a delay phase axis of the third retardation plate is roughly  $2\theta + 45$  degrees, the delay phase axis of the third retardation plate and the delay phase axis of the second retardation plate are nearly at right angles with each other, and the difference in the in-plane retardation between the third retardation plate and the first and the second retardation plates is not smaller than 95 nm but is not larger than 195 nm, which is one-fourth the region of visible light wavelengths.

22. A reflection-type liquid crystal display device according to claim 13, wherein an undrawn film is used as the first retardation plate.

23. A reflection-type liquid crystal display device according to claim 13, wherein a reflection preventing film is provided on the surface of at least the first retardation plate.

24. A reflection-type liquid crystal display device according to claim 13, wherein a sticking layer provided between the polarizing plate and the light guide plate has a light-diffusing function.

25. A reflection-type liquid crystal display device according to claim 13, wherein a sticking layer provided between the first retardation plate and the reflection-type liquid crystal display panel has a light-diffusing function.

26. A reflection-type liquid crystal display device according to claim 13, wherein the surfaces of the first retardation plate and of the second retardation plate facing each other are smooth surfaces.

27. A reflection-type liquid crystal display device according to claim 13, wherein a viewing angle control plate for diffusing the incident light from a particular direction is disposed between the light guide plate and the reflection-type liquid crystal display panel.